WATER QUALITY TEAM MEETING NOTES

May 8, 2001
National Marine Fisheries Service Offices
Portland, Oregon

Introductions and Review of the Agenda.

Mary Lou Soscia of EPA, WQT co-chair, welcomed everyone to the meeting, held May 8 at the National Marine Fisheries Service offices in Portland, Oregon. The meeting was facilitated by Donna Silverberg. The meeting agenda and a list of attendees are attached as Enclosures A and B. Please note that some of the enclosures referenced in these meeting notes may be too lengthy to routinely attach to the minutes; please contact Kathy Ceballos (503/230-5420) to obtain copies.

1. Water Quality Plan Update.

Discussion of this topic was deferred until next meeting.

2. TMDL Presentation.

Soscia said that, as the WQT is aware, EPA has been using the WQT as a forum for sharing information about the TMDL development process. We are continuing to move forward and are holding monthly meetings with EPA, the states and the tribes, she said; one new thing we're really pleased about is that the Western Governors' Association has committed to provide support, specifically on outreach efforts and the dissolved gas workplan. We have a meeting with the Western Governors' Association next week in Boise, she said. EPA also conducted a congressional briefing yesterday in Washington D.C. to inform the Oregon, Washington and Idaho congressional delegations about TMDL development.

In short, we're moving forward, Soscia said; we now have a draft temperature workplan (this document is Enclosure C). Soscia then moved into a general presentation on the Columbia/Snake River Temperature TMDL; copies of this presentation are attached as Enclosure D. Soscia touched first on the various Internet links to the WQT development effort:

- EPA Region 10 homepage: www.epa.gov/r10earth/index.htm
    - Columbia/Snake River TMDL homepage: www.epa.gov/r10earth/columbiamainstemtmdl.htm
    - Office of Water TMDL homepage:

www.epa.gov/OWOW/tmdl/index.html

Soscia continued on, touching on the following topics:

- What is a TMDL?
- The boundaries and geographic scope of the Columbia/Snake mainstem TMDL (the mouth of the Columbia to the Canadian border; the Snake River from its confluence with the Columbia River to its confluence with the Salmon River)
- The state and tribal agencies with a CWA role in the project area
- Columbia/Snake River 303 (d) listings for temperature
- The technical process for the development of the TMDL
- The applicable water quality standards
- The definition of numerical targets for the TMDL
- Interpretation of the water quality standard
- The identification of sources and evaluation of linkages of sources to river response
- How loading capacity will be quantified
- How loads will be allocated

Please refer to Enclosure D for further details of Soscia's presentation.

Soscia also went briefly through Enclosure C, noting that the final water temperature TMDL is due out by August 2002; between now and then there will be four workshops. This June or July, there will be a workshop on modeling, either in Seattle or Portland. Soscia asked which would be easier for the WQT membership; there was general agreement that Portland would be preferable. Soscia said additional workshops will cover problem assessment and numerical targets (in July or August) and loading capacity and allocations (in September or October). There will also be public meetings in the spring of next year, to gather public input prior to the finalization of the TMDL. She noted that the next meeting between EPA and the states will be held May 24 in Boise; the action agencies are invited to attend the afternoon session.

Russell Harding said the states have met with the Corps to discuss the development of the dissolved gas TMDL; the Corps indicated an interest in participating in its development. This was welcome news, he said; at that meeting, we laid out what we thought the gas TMDL might look like. There were some furrowed brows, but no violent screams, he said; however, there will need to be some additional coordination between our effort and the Corps' DGAS work. The Corps agreed to lay out a scope of work, which has now been completed; the next step will be to reconvene to talk about that scope of work. Also, said Harding, EPA has provided $26,000 for some of the quantitative work that will need to be done in support of the gas TMDL.

In response to a question from Joe Carroll, Harding said the gas TMDL will include all of the same components contained in the water temperature TMDL. The main issue is, what is the acceptable amount of the pollutant in question (in this case, dissolved gas), and how is it to be allocated? In the gas TMDL, we're looking at a series of allocations for each project in the lower river, said Harding; in a pure sense, the metric for dissolved gas would be a volume of air. For McNary Dam, for example, we might say that the allocation for McNary Dam would be so many liters of air. Unfortunately, the system simply doesn't function that way; there are too many

factors that influence the production of dissolved gas – total river flow, spill quantity, incoming gas etc. We believe the most sensible load allocation will likely be spill quantity, said Harding. Our naive belief was that the equations that have been produced in DGAS define what those variables are; it should be possible, therefore, to set the standard at 110% and then define the acceptable quantity of spill under the various physical factors that influence TDG production.

Obviously, there is a lot that still has to be worked through here, Harding said; while many have argued that we can't manage the TMDL on a project-by-project basis, because the system is operated as a system, as long as those variables include total river flow and incoming gas, we should have some scope for project-by-project management.

We will meet with the Corps next week, said Harding; our contractor is standing by to get going once we work through the scope of work to make sure there are no holes that need to be filled. We'll keep the WQT informed, he said. Chris Maynard noted that there is a subgroup working on the point of compliance; that is very important work, he said, because that point of compliance must be as clear as possible. Harding added that the dissolved gas TMDL will be finished by December 31, 2001; the next question is, what does that mean for the projects themselves? It doesn't mean they have to be instantly in compliance, he said; the TMDL will include an implementation plan that will span at least 10-15 years. The starting point is where we are now; the end point, in 15 years, is compliance with the 110% standard as well as whatever fish passage criteria NMFS sees fit to impose.

Harding added that, in his view, if, after 13 years, TDG in the system is down to 110.2%, but we discover that, to obtain the next 0.2% will cost the region $3 billion, that's the point at which we need to sit down with the region and talk about whether or not that $3 billion could be put to a better use. That's the most sensible statement I've heard on this topic since these discussions began, said Steve Hayes.

The group spent a few minutes discussing the intricate and sometimes conflicting relationship between spill for fish passage and the efforts to limit TDG production; ultimately, Soscia suggested that many of these issues will likely be addressed during the consultations prior to the finalization of the mainstem TMDL.

3. COE Report on Long-Term Variance Requests and Update on Meeting With States.

This topic was not discussed at today's meeting.

4. Gas Monitoring Subcommittee – Update on Recent Activities.

Joe Carroll said the subcommittee has spent a great deal of meeting time in recent months expanding its role; at its April 6 meeting, the group pulled back a bit, and refocused on the specific RPAs in the BiOp so that it can accomplish its mission. The group made a variety of recommendations; they include no additional sampling at this time, that the Corps go through a process of reviewing the available data to evaluate the representativeness of each forebay station, the development of a definition of these forebay stations and their appropriate function; and a review and development of a recommendation on each of the existing forebay monitoring stations.

Is there anyone from the PUDs on this subcommittee, at this point? Maynard asked. No, Carroll replied. It would probably be a good idea to add someone fairly soon, Maynard said; at least, it's something the subcommittee should talk about. Rick Klinge replied that, when it comes to setting the TMDLs for their projects, the Mid-Columbia PUDs definitely want to be intimately involved; however, when it comes to this type of technical discussion, they're willing to trust the Corps to define the optimal monitoring locations.

Carroll added that no additional meetings of the subcommittee have been scheduled at this time; the group is somewhat in limbo until Mark Schneider's recovery from back surgery.

5. Report on Transboundary Gas Group Meeting.

Soscia characterized the April Transboundary Gas Group meeting in Portland as extremely productive; it was attended by more than 50 people from both sides of the border, and a great deal of progress was made. She distributed Enclosure E, a brief set of summary notes describing the outcome of the discussion of Project 1 (characterize existing transboundary gas conditions), Project 2 (identify data and information needs for screening models), Project 3 (identify structural and operational alternatives) and Project 4 (examine existing treaties and their implications for dissolved gas management). She went briefly through this document; please refer to Enclosure E for details of Soscia's talk. The next meeting of the Transboundary Gas Group will be held on October 23-24 in Nelson, B.C., Soscia said, adding that the formal notes from the April TGG meeting will be distributed soon. The group briefly discussed Project 3; Soscia said she will be talking with Mark Schneider and various Corps representatives about the next steps in this project.

6. Dworshak Modeling Results.

Soscia distributed Enclosure F, a document titled "Pre-Decisional Draft -- Water Temperature Simulations for the Snake River Using NMFS Flow Scenarios." She asked whether or not, in light of Margaret Filardo's observation at an earlier WQT meeting, the WQT might be prepared to take a position on this report, given the crucial relationship between water temperature and fish health, and the key role Dworshak reservoir plays in water temperatures in the Snake River and, potentially, the lower Columbia.

The conditions we're going to see this summer will put an even greater emphasis on Dworshak's role, said Soscia, particularly given the fact that no spill has occurred so far this spring and some are now saying Dworshak storage should be used to provide spring spill. EPA was asked to use its water temperature model to look at various release options for Dworshak, given two starting elevations: 1580 and 1565, and the resultant impact on flows and temperatures at various Snake River dams. Two meteorological conditions were used, she said; 1977 and 1998.

Soscia and John Yearsley spent a few minutes going through Enclosure F. In essence, Soscia said, what this data shows is the number of days water temperatures at Lower Granite, Little Goose, Lower Monumental and Ice Harbor Dams will exceed 20 degrees C if we assume

the two starting elevations and Dworshak releases starting July 1:

1977 Meteorology

	Elevation 1580	**Elevation 1565**
Ice Harbor	43 days	49 days
Little Goose	22 days	44 days
Lower Granite	0 days	25 days

1998 Meteorology

	Elevation 1580	**Elevation 1565**
Ice Harbor	77 days	84 days
Little Goose	81 days	81 days
Lower Granite	40 days	59 days

The bottom line from this analysis is that EPA's position is that it would be better to hold the Dworshak storage for use this summer, Soscia said – our preference would be to try to see if we can figure out any other way to provide the water for spill rather than Dworshak water, and use the Dworshak water for spring spill only as an absolute last resort. I wanted to see if we could reach WQT consensus on that recommendation, she said.

The tribes definitely agree with EPA's recommendation, said Tom Lorz – we feel Brownlee should be used for any flow augmentation in the spring, while Dworshak water should be used later in the summer. Harding said EPA's recommendation is entirely consistent with Oregon's past position on this issue, although this year is very different, given the lack of water for spill this spring. Would you agree that Dworshak should be the very last priority, in terms of potential sources of water for spring spill? Soscia asked. In other words, we're not saying Dworshak absolutely should not be used to provide water for spring spill – EPA is simply recommending that all other possibilities should be exhausted first. Harding said Oregon would have no disagreements with that statement.

Maynard said that, from a purely water quality standpoint, WDOE would agree with EPA's recommendation; however, he is not sure of WDFW's position, so he will need to check to see whether or not Washington as a state supports EPA's recommendation. Dennis Lynch of the Geological Survey said that, from his perspective, EPA's recommendation makes a great deal of sense. Dave Zimmer of Reclamation said he is somewhat torn; from a water quality perspective in the Snake, this may be the way to go, but Reclamation also has to consider the impacts of the lack of spill on spring migrants. In other words, he said, I'm not sure where Reclamation stands on this issue.

Jim Irish said the use of Dworshak for temperature control has proved very efficient over the years; it is in line with what BPA has agreed to in the past. The question is, what spill are you looking at? I agree we should try to keep Dworshak water for use in temperature control later in the season, but on the issue of drawing down Brownlee or Grand Coulee for spill, I

would have to defer to the NMFS staff to determine if that's the best use of those reservoirs, Irish said. BPA is concerned about what will happen with Lake Roosevelt if Grand Coulee is tapped to provide spill this spring; there are unpredictable effects extending well into the future. As far as the concept of using Dworshak for temperature control this summer and fall, however, that is consistent with BPA's past position – it's the long-term impacts that need some further analysis, Irish said.

Rick Klinge said Douglas PUD supports the EPA recommendation, although releasing the Dworshak water earlier might have some benefits to the Mid-Columbia stocks. Given the type of water year before us, Klinge said, we would recommend sticking with what has worked in the past.

Carroll said that, while he is from the Corps' research side and cannot speak for the Corps' policy staff, the research does demonstrate that the cold-water releases from Dworshak are beneficial from a water temperature standpoint during the summer. How that water is released from Dworshak and subsequently routed through the projects downstream is critical to the success of this operation, particularly whether the water is spilled or passed through the powerhouse at Dworshak, Carroll observed - in other words, how we choose to operate Dworshak needs to be factored into your modeling, because it has a great deal of impact on water temperatures downstream. Our assumption is that the cold water – 48 degrees F – will be available from Dworshak, and that that will be the temperature of the Dworshak releases, Yearsley replied.

Soscia said the water temperature simulations report will soon be available via the EPA website. To summarize, then, from a water quality standpoint, it does seem to make sense to hold the water until later, although there does need to be a balance between biological needs and water quality needs, in determining when the Dworshak water should be released, Silverberg said. This is with the caveat that a number of representatives have said they would need to check back with their home offices before they can provide an absolute endorsement of the EPA recommendation, Silverberg said.

Was this a useful agenda item? Soscia asked. As similar issues arise, does it make sense to try to develop a unified WQT recommendation? There was general agreement that this was a very useful discussion, particularly given the fact that the Regional Executives are meeting every two weeks, and have asked for the guidance and input of the Regional Forum technical teams. Irish asked that, in the future, pre-decisional documents such as Enclosure E be sent out with the agenda, so that the WQT participants can have any necessary discussions within their agency prior to the WQT meeting at which the decision needs to be made. There was general agreement that this would be appropriate.

7. Columbia/Snake River Mainstem Monitoring Paper.

Soscia distributed Enclosure G, the draft "Outline of a Monitoring Program for Estimating the State of Water Temperature in the Columbia and Snake Rivers." Yearsley went briefly through this document, noting first that the scroll case monitoring network is the oldest in the system; in general, he said, the state of the temperature monitoring remains fairly primitive,

considering how much money is spent on monitoring every year.

As a result of our field survey of the four Lower Snake Dams and McNary Dam, Yearsley said, we produced this report, as well as a more formal white paper on monitoring. There is a general consensus that there is a need for a more unified approach, he said; this is hardly a new recommendation, as there have been various initiatives proposed over the past several years. Basically, he said, I don't believe there is a real understanding of how we use temperature to assess conditions in the Columbia and Snake systems. The models we use are energy budget-based; we need to be able to account for all of the BTUs that go into the system, which requires a very well-organized monitoring plan – an organized way of looking at monitoring, of which temperature monitoring is only one element. I have yet to see focused attention on the development of such a unified plan, and that's a concern, said Yearsley; quality assurance and quality control are also serious concerns.

This paper (Enc. G), then, is my recommendation as to such a unified monitoring approach, Yearsley said.

Carroll replied that the Corps has gone to a great deal of trouble and expense to improve quality assurance/quality control in its fixed monitoring program; the same is true of Reclamation, he said. This factor is reviewed annually, Carroll said; while there are many examples of erroneous data in the historical database, the situation has improved dramatically in the past several years. I would have to say that there is a great deal going on, in terms of improved QA/QC in at least a portion of the monitoring system, Carroll said.

Klinge observed that, given the water and meteorological conditions expected this summer, water quality monitoring is critically important, because it will set a benchmark for water quality monitoring and conditions during low-flow years into the future. We need to be very careful that the data we collect this year are accurate, and truly reflect the actual in-river conditions, to the greatest extent possible, he said. Dennis Lynch added that it would be useful if a measurement of solar radiation could be added to the monitoring network in the future; Yearsley agreed that this would be a valuable addition.

What happens next with this issue? Silverberg asked. EPA is working directly with the Corps to move it along, Soscia replied; we will be presenting it at a meeting tomorrow in Seattle. Again, there have been a number of other initiatives on this subject, said Yearsley; obviously, there is a great deal of interest in the accuracy of water quality monitoring in the Snake and Columbia Rivers.

8. Next WQT Meeting Date.

The next meeting of the Water Quality Team was set for Tuesday, June 12, from 1-4 p.m. at NMFS' Portland offices. Meeting notes prepared by Jeff Kuechle, BPA contractor.